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BUSINESS 3

INGENUITY

Volume 1

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Brownfields Turn Green

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Information and Ingenuity That You Can Use

Tony Bogar

B*usiness Ingenuity*, as you may already know, has two purposes. First, it is designed to provide you with ideas and information you can incorporate into your business. Second, it is intended to show off the ingenuity that exists here in Massachusetts. Nowhere do those two missions fit together better than in our interview with Dr. Robert Merton.

Robert Merton isn't the only person in the Bay State who has developed innovative theories that have become practical realities. Not by a long shot. But he is an excellent example of how Massachusetts ingenuity is affecting the entire business world.

It is here in the Bay State, at the Massachusetts Institute of Technology (MIT) and now at Harvard University, that Merton has done his innovative work on risk management. That work has earned him a Nobel Prize in economics for the options pricing formula he developed with Fischer Black and Myron Scholes.

But he has done more than write theory. He has bridged the gap between academia and the "real world" of business. In our interview he lays out the future of corporate risk management in terms that any layman can understand. He shows how complicated mathematical formulas can be used in a practical way by companies in any industry to better manage their businesses, whether they are in finance or pharmaceuticals. He even predicts the rise of a new position within the corporate hierarchy, the "chief risk officer."

Merton also realizes that risk management theory and technology go hand in hand. In one sense, you cannot make use of technology if you do not have the underlying theory. "You could have all the computing power in the world," he says, "and if you don't know what to apply it to, it's not going to do any good." But just as important, technological advances have made it that much easier to incorporate deeper levels of analysis, to look at an increasing number of nuances that may affect the final outcome of a model. It becomes obvious that innovations in both fields feed into each other.

Our feature on the Year 2000 problem is another example of how we at *Business Ingenuity* strive to bring you useful information while highlighting the ingenuity fostered here in Massachusetts.

You've all heard about the Y2K problem. You may have already looked into it, maybe you've even asked for

**There are many ways to
address the Y2K problem.
The better solutions will
correct the problems now,
without needing further
fixes on January 2, 2000.**

advice on how to fix it. But odds are you have not ensured that your business will not be affected. Most businesses haven't gotten that far yet. The same technology that probably has saved your company untold dollars in productivity now threatens your company.

There are many ways to address the Y2K problem. Some of them are merely slapdash, temporary solutions that can get businesses through the critical time period. Eventually someone will have to go back in and correct all the underlying problems. The better solutions will correct the problems now, without needing further fixes on January 2, 2000. People have come up with some innovative ways to root out and change all the dates in the underlying codes. Much of that innovation was developed here.

But you probably don't care where the ideas originated, not when the future of your business is at stake. You want practical advice. Well, *Business Ingenuity* is not a computer magazine. We don't claim to have all the answers. But we can point you in the right direction. We can tell you what companies are trying to help. And, even better, if you are doing business here in Massachusetts, we can tell you how the state is helping businesses correct their millennium bugs.

We hope *Business Ingenuity* becomes a valuable tool for you and your company. Your feedback can help us fill that role. Please send your comments to: *Business Ingenuity*, 125 Walnut St., Watertown, MA 02472; tbogar@skinjam.com.

Tony Bogar

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1 ☐ Manufacturing 2 ☐ Information Technology 3 ☐ Biotechnology
4 ☐ EnviroTech 5 ☐ Telecommunications 6 ☐ Financial Services
7 ☐ Other _____

B. YOUR ROLE IN BUSINESS EXPANSION

10 ☐ I make final decisions 11 ☐ I make preliminary recommendations
12 ☐ I assist in information gathering 13 ☐ I am not involved in these decisions

C. DOES YOUR COMPANY PLAN TO OPEN A NEW FACILITY/RELOCATE IN THE NEAR FUTURE?

20 ☐ Within 1 year 21 ☐ 2-3 years 22 ☐ 4 years or more 23 ☐ 5 years or more

D. WILL THIS EXPANSION/RELOCATION EMPLOY:

30 ☐ 10-19 people 31 ☐ 20-49 people 32 ☐ 50-99 people
33 ☐ 100-999 people 34 ☐ 1,000 people or more

E. NUMBER OF EMPLOYEES IN YOUR COMPANY

40 ☐ 1-24 41 ☐ 25-49 42 ☐ 50-99 43 ☐ 100-499
44 ☐ 500-999 45 ☐ 1,000-4,999 46 ☐ 5,000-9,999 47 ☐ 10,000 or more

F. ANNUAL SALES VOLUME OF YOUR COMPANY

50 ☐ Less than \$1 million 51 ☐ \$1 - \$9 million 52 ☐ \$10 - \$49 million
53 ☐ \$50 - \$99 million 54 ☐ \$100 - \$499 million
55 ☐ \$500 - \$999 million 56 ☐ \$1 billion or more

G. WHERE IS YOUR PARENT COMPANY LOCATED? (*if applicable*)

60 ☐ Massachusetts

61 ☐ Other: _____
city/state (*required*)

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F E A T U R E S

Robert Merton

A discussion on risk management with Robert Merton, Harvard University business professor and Nobel Prize-winning economist

By Brian O'Connell

Spend some time around a Fortune 500 board room, and you won't have to wait long before you hear the term "risk management." With all the buzz surrounding risk, you might think it's a Johnny-come-lately to the business world. It isn't. Nobel Prize winner Robert C. Merton, Professor of Business at Harvard University, has been studying risk since the 1960s. **Page 6**



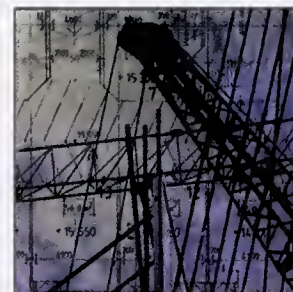
TARANTOLA

Brownfields Turn to Green

New law promises to bring contaminated properties back to useful life

By Brian Sullivan

In August 1998 Governor Paul Cellucci signed Massachusetts' new brownfields provisions into law. Many business leaders and local government officials say that single pen stroke may eventually become the act that created thousands of jobs and allowed some of the state's older mill cities to reclaim their heritage as industrial and commercial leaders, as well as reclaim some of their lost land. **Page 12**



Out of Time

Small businesses grapple with Y2K

By John H. Mayer

When Jan. 1, 2000 rolls around, computers may or may not roll with the date. While a majority of larger firms seem to have grasped the potential impact of the Y2K issue and have already launched programs to fix the problem, the message apparently hasn't percolated down to smaller businesses. Most have yet to start Y2K projects.

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The centerpiece of the new law is a reduction in the tax on interest and dividends, which drops from 12 percent to 5.95 percent. This alone, according to a 1997 study by Standard & Poor's DRI, should create 28,000 new jobs and add \$2.4 billion in personal income in the next 10 years.

Major Tax Cuts Signed Into Law

Governor Paul Cellucci has signed into law a major tax reduction bill, which has been described as a "\$700 million tax cut package" and provides significant advantages both for businesses and for Massachusetts residents. "The reduction...will have a substantial, positive long-term impact on economic development in the Commonwealth," says David A. Tibbetts, Massachusetts Director of Economic Development.

The centerpiece of the new law is a reduction in the tax on interest and dividends, which drops from 12 percent to 5.95 percent. This alone, according to a 1997 study by Standard & Poor's DRI, should create 28,000 new jobs and add \$2.4 billion in personal income in the next 10 years. The tax cut also should serve to reduce the numbers of Massachusetts residents leaving the state in search of lower taxes. The law "hammers one more nail—and a big one—into the coffin of 'Taxachusetts,'" Tibbetts says, referring to the moniker the Bay State earned while its taxes were still sky-high—and to a perception Massachusetts has been working very hard in recent years to counteract.

In addition to the income tax cut, the law reduces unemployment insurance (UI) rates for employers, going from Schedule C to Schedule B on January 1, 1999, and saving Massachusetts employers approximately \$98 million. Last year rates had gone down from Schedule E to Schedule C, reducing costs by \$200 million.

"Even with lower employer contributions, our UI Trust Fund is at its highest level in history, and will likely exceed \$1.7 billion by the end of this calendar year. This will provide a comfortable cushion in the event of a slowing in the economy," Tibbetts says. He notes that the money saved by employers on the cost of such things as income tax and workers' compensation can be used instead to invest in and improve businesses—strengthening the economy and benefiting employees and the state as a whole.

Massachusetts Makes the Grade

Massachusetts' economy was awarded an Honor Roll commendation by the Corporation for Enterprise Development (CFED), a non-profit research and policy group, in its *1998 Development Report Card for the States*.

The report rates states' economies in three categories: Economic Performance, Business Vitality, and Development Capacity. In the Economic Performance category, Massachusetts' "excellent earnings" and "job quality" were praised as the state's biggest strengths, with average annual pay in Massachusetts ranking fourth in the nation. Also ranking fourth was Massachusetts' business sector in the Business Vitality area. Massachusetts received an A in this category, as well as for the final category, Development Capacity. The state did extremely well in almost every section, particularly in Technology Resources, where it was ranked number one in the United States.

Massachusetts also ranked number one in the categories of college attainment, science/engineering grad Students, SBIR grants, and the ratio of commercial and industrial loans to total loans. The state ranked number two in university research and development and urban mass transit, and achieved additional high scores in many other sections.

Taken together, these scores put Massachusetts on the Honor Roll, along with only six other states: Colorado, Washington, Delaware, Minnesota, Oregon, and Utah.

Certification for Plastics Workers

Nypro, Inc. and the University of Massachusetts at Lowell have teamed up to offer the On-Line Plastics Technology Certificate Program, a program comprising 10 courses in plastics processing. Students can complete the program for a certificate or transfer the credits to UMASS-Lowell. The program is open to the general public and can benefit both experienced plastics workers and those new to the industry.

The program started in October 1997, says Nypro's Enio Velazco, Corporate Director of On-Line Education, after Nypro had been tutoring its own employees in a similar program for 20 years and UMASS had been doing the same for nearly as long. The two organizations collaborated, adding and updating courses where necessary, and the result is a full program of classes that can also be taken individually.

The advantage of an on-line format, says Velazco, is that students "can take the courses at any time, from anywhere, and at any pace." Students are allowed up to six months to complete an individual course, but Velazco says that "at an average of five to eight hours a week, it

takes about 14 weeks" to finish one class.

Students are assigned into groups of 30 with an instructor—Nypro employees or other practitioners from the plastics industry. Instructors are "people with hands-on experience" who have been in the industry for at least 10 years. Lessons are downloaded, and the students can communicate with each other and with the instructor via e-mail or during special on-line chat sessions. Students have reading assignments and homework and are required to take a midterm and a final exam. The tuition cost is \$350 per course, or \$400 to gain UMASS credit, plus a \$50 lab fee and the cost of any required textbooks.

Basic Injection Molding and Introduction to Mold Design are the two courses that are available right now; the others will be coming on-line within the next few months. Velazco says that for the most part the courses can be taken in any order, though Process Optimization is based on information covered in some of the other classes and should ideally be taken last, and Basic Injection Molding makes a good introductory course.

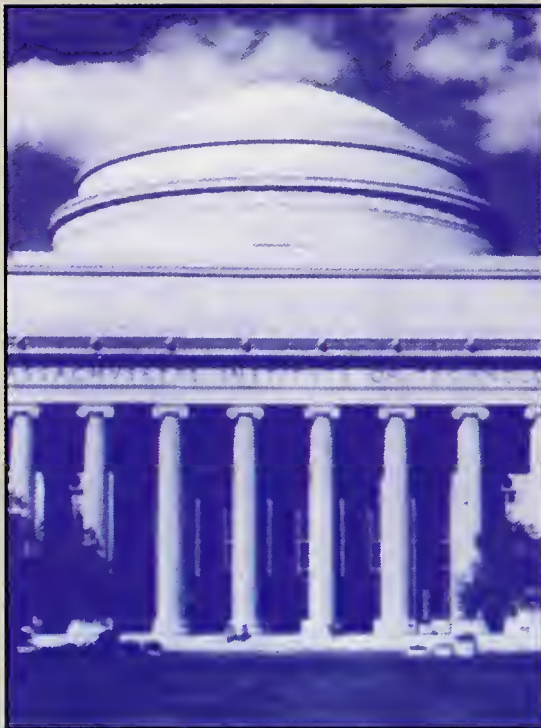
Information on the program can be found on-line at www.nyproonline.com/Nypro-UMass.

MIT's Influence Spreads Far and Wide

The Massachusetts Institute of Technology's (MIT) influence is being felt not just in the Bay State but all over the world. A report released by BankBoston, based on an MIT survey of 1,300 CEOs as well as research conducted by the bank and MIT, revealed that the university's graduates have founded a total of 4,000 companies, which in 1994 (the year for which the most recent data is available) generated \$232 million in revenue and employed 1.1 million people worldwide. In fact, if the companies combined formed their own country, their total revenues would make that country's economy the 24th largest in the world—right between South Africa and Thailand.

In the United States, 733,000 people were employed at MIT-founded companies, accounting for one out of every 170 jobs in this country. California and Massachusetts have benefited the most from MIT-related jobs, with 162,000 and 125,000, respectively, in 1994. Other states with large numbers of jobs from MIT-founded companies include Texas (84,000), New Jersey (34,000), Pennsylvania (21,000), and Ohio (18,000). MIT-related jobs are in all 50 states and around the world, with 220 of the companies based outside the U.S.

Many of the companies are "knowledge-based," dealing in software, consulting, or manufacturing of products in areas such as the electronics and biotech industries.



"In a national economy that is increasingly emphasizing innovation, these findings extend our understanding of how MIT has been instrumental in generating new business nationwide."

— Wayne M. Ayers, Chief Economist, BankBoston.

The report noted that "these companies have a disproportionate importance to local economies because they usually sell to out-of-state and world markets, and because they so often represent advanced technologies." Many of the companies' founders reported that they have retained close ties to MIT and its faculty.

The MIT/BankBoston study is the first to examine the national economic impact of a university. "In a national economy that is increasingly emphasizing innovation, these findings extend our understanding of how MIT has been instrumental in generating new business nationwide," says Wayne M. Ayers, Chief Economist of BankBoston. "MIT is not the only university that has had a national impact of this kind, but because of its historical and continuing importance, it illustrates the contribution of research universities to the evolving national economy."

High-Ranking Health Insurance

Good news for both Massachusetts businesses and their employees: *Newsweek* magazine, in its annual study of managed-care health plans around the country, has ranked several Massachusetts programs high on the list. Harvard Pilgrim Health Care made the number one spot, receiving A's and B's across the board. Tufts Health Plan was close behind at number two. In all, four of the top 10 spots were held by Massachusetts companies: Harvard, Tufts, HMO Blue at number three, and Healthsource Massachusetts at number eight.

Massachusetts companies also took the top two spots in the study's ranking of Medicare plans: First Seniority came in at number one and Fallon Senior Plan at number two.

The magazine surveyed more than 200 plans and evaluated the results in three categories: health maintenance, treatment of illness, and management of chronic conditions, both for adults and for children. It also rated customers' overall satisfaction and noted whether the plan was accredited by the National Committee for Quality Assurance in Washington, D.C. ●

State Agency as Venture Capitalist?

You Bet Your Bottom Dollar

Brian O'Connell

One of the best-kept secrets in the Massachusetts public sector celebrated its 20th birthday in October.



The Massachusetts Technology Development Corporation (MTDC), a quasi-public agency, has helped launch some of the most successful high-tech companies in the Commonwealth. MTDC has grown accustomed to going about its work quietly and effectively, investing more than \$34 million in 83 entrepreneurial efforts, much of it happening without taxpayer money and all without fanfare.

Launched in 1978 with \$3 million of funding from the federal government and \$5.2 million from the state, most of which was released incrementally between 1980 and 1988, MTDC is the Johnny Appleseed of Bay State start-ups. The agency's mission is to provide seed money for the bevy of high-tech pioneers concentrated in Massachusetts. MTDC caters to those fledgling entrepreneurs who have the smarts and work ethic, but not always the financing, to take good ideas and translate them into profitable goods.

According to MTDC President John Hodgman, the agency targets entrepreneurs seeking venture capital funding in the \$2 million-and-under range, using roughly \$27 million in assets earned through previous investments in high-tech start-ups over the years. "We're a part of 60 Bay State companies employing 8,600 people, and we're really proud of that," says Hodgman. "Back in 1988 when the state was dealing with a huge budget deficit, the Legislature came to us and told us we'd have to be self-sufficient from that point on. We'd have to use our own gains to continue operating and helping start-ups, and we've been able to do that. Not only have we harvested past investments, we've used them to invest in new companies."

The agency reviews 250 business plans annually, whittles them down to seven or eight, and finally settles on four or five fortunate companies to invest in. "We'll start off with a small investment of between \$150,000 and \$300,000 and look for co-investors to come up with the rest of the money," Hodgman explains. "We like to

address the start-up capital gap and provide the funding to get young companies off the ground. I liken what we do to amphibious military landings. We just want to get the troops safely on the beach and then recruit other investors to come along and take over from there."

Well-known names like Interleaf, Kronos, and Microtouch Systems have received funding from MTDC. In fact, Massachusetts-based, high-tech firms that have cashed in from the agency's efforts are scattered throughout the state.

"They worked great for us," says Dr. Ed Sinovsky, President of West Yarmouth-based Rare Earth Medical, Inc., a medical laser product developer founded in 1990. "We not only received money from MTDC, we were treated like one of the family here in Massachusetts. Both MTDC and the Massachusetts Office of Business Development [MOBD] look at start-up efforts here in the state as an all-for-one, one-for-all investment with close ties to Massachusetts. We've had a great deal of help from both agencies."

Sinovsky says some venture capital companies soured on the notion of building a business on Cape Cod, away from Boston and the high-tech belts around Route 128 and I-495. "A lot of venture capitalists we approached didn't like the fact that we were down on Cape Cod. They told us we were too far away," he says. "MTDC had no such problem. In fact, they told us they wanted to see more businesses like ours down on the Cape."

MTDC has gained support not only from the high-tech firms it helped establish, but from leaders in the business community as well. "I was initially skeptical about putting Massachusetts taxpayers' money at risk," notes Howard Foley, President of the Massachusetts High Technology Council, "but I've been pleasantly surprised at the work being done by MTDC. They've marshaled their resources, made good investments, and have benefited from solid leadership. The state has tried this type of thing before and it hasn't always worked. Until now." ●

by Brian O'Connell

Spend some time around a Fortune 500 boardroom, and you won't have to wait long before you hear the term "risk management." Corporate offices worldwide are buzzing about hedge funds, options pricing, currency swaps, loan guarantees, and other complex derivative strategies.

With all the buzz surrounding risk, you might think it's a Johnny-come-lately to the business world. It isn't. Dr. Robert C. Merton, Professor of Business at Harvard University, has been studying risk since the 1960s. His work on options pricing strategies in the 1960s and early 1970s was so impressive that he was awarded, with two associates, the 1997 Nobel Prize in Economics. Recently, his work with the hedge fund Long-Term Capital Management generated publicity when global turmoil put the emphasis back on the risk in risk management.

But the Black-Scholes-Merton option pricing model, created 25 years ago, is still the benchmark for virtually all security pricing models in use today. Techniques for valuing companies, particularly those with complex investment opportunities, are direct applications of Merton's theories.

"Merton's methods have been applied to an enormously wide range of economic problems, ranging from pure theory to the very practical design of new financial securities," says Carliss Baldwin, a business professor at Harvard. "His valuation methods made it possible to customize financial claims to suit the preferences of buyer and seller alike. Thus, his theories are the analytical underpinning of the huge, global market for derivative securities. Like Paul Samuelson, Bob Merton has changed the foundations on which the science of economics is built," he adds, referring to the Nobel Prize-winning economist at the Massachusetts Institute of Technology (MIT).

R O B E R T

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**A discussion on risk management with
Robert Merton, Harvard University
business professor and Nobel Prize-
winning economist**



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Merton spoke with *Business Ingenuity* this past summer about risk management and how corporations are embracing risk as a fundamental corporate strategy.

BI: *You've spent a lot of time in your career evaluating risk. What drew you to this field as a young man?*

Merton: My father was a professor who introduced me to many things. One of these things was the stock market. I think I bought my first share of stock when I was about 10 or maybe 11. It was General Motors. I was intrigued by following the market. I don't generally like gambling, but I like playing poker. It's just sort of thinking about probabilities and odds and money management and control. The idea is that you have it inherently in the small game or in the larger game of the markets; certainly it's inevitable and it permeates every part of our life. I had an interest in mathematics, and I don't know which informed which, but the two came together because mathematics is a proper tool for analyzing and dealing with uncertainty.

And you can't essentially stop the uncertainty, if that's a real part of it all. It's just being able to analyze it, and think about decision-making and the trade-off. So that's been a part of my interest, I guess, since I was 10 or 11 years old.

BI: *Your Nobel Prize work in the area of option pricing strategies has been ongoing for some time. What does that work entail and with whom did you work?*

Merton: The work for which we were specifically given the Prize was the development of an option pricing model which has been applied to an extraordinary number of different kinds of knowledge, not only financial instruments, but non-financial ones as well.

I worked with Fischer Black and Myron Scholes. Fischer Black died in 1995 and so he wasn't strictly eligible for the Prize posthumously, but had he been alive, he would have shared the award. Dr. Scholes and I still work together, although I'm doing a lot more work on my own.

BI: *How has your work—which is extremely sophisticated—been turned into practical use today?*

Merton: I think we should step back. In late 1971 or early 1972, Myron Scholes and I were contacted by researchers from the Options Department at the Massachusetts Institute of Technology. They heard that we had developed some ways of not only evaluating options, but also analyzing their risk exposure so their positions could be hedged. They asked us to come down and describe what we were doing.

So we went down and did a number of studies and analyses for both MIT and later for the over-the-counter stock options market. Then with the opening of the Chicago Board Options Exchange in the 1970s, the first listed options exchange ever, we were ready to go into the options market. We chose the options market for our work on risk evaluation because there were some extraor-

dinary changes in the field of risk management from the '60s into the '70s. The '60s were an unusual period of a very quiet, retrending-upward equity market: stable interest rates, low inflation, and fixed currencies.

The '70s were different. *The Bretton Woods Agreement* broke down, causing downward currencies; there was an oil cartel crisis; and we had the creation of double-digit interest rates and double-digit inflation rates. We also had the largest decline in real terms in the 18 months from 1973 through 1974 that you would find at any time in the U.S. in the 20th century, including during the Depression. Then the options markets came along, giving investors the opportunity to manage risk like never before.

Now the way options were done in the past in the over-the-counter market was very sloppy. There was no mass selling market, and a lot of people used rules of thumb to manage risk. What they discovered with the liquid markets was that the old ways just didn't work. There was a little bit of a competition between what you might call the "experienced" people who had a lot of market experience in all the other out-of-town markets (and who were using the rule-of-thumb strategy), and the "less-experienced" people who were using the more analytical techniques. In the end, the latter won out because with the speed and spreads of the options market, you had to be much more precise with your risk calculations.

I think the impact of our contribution was not only being able to price options, but also to be able to describe the exposures. So to get predictions—how much the option price would move in response to a change in the underlying security, in this case, stock—[was] at least as important, because it allowed themes for market makers and for others to hedge and measure the risk of their exposures.

BI: *What is the relationship between technology and risk management?*

Merton: Clearly, they work in unison. First, you had the development of financial technology. Without the financial technology, the computer technology and the telecommunications part wouldn't work. You could have all the computing power in the world, and if you don't know what to apply it to, it's not going to do any good. But at the same time, one of the things about the development of our risk technology was that not only could it be applied to options, but to all kinds of things which we can get into.

I like to say that technology is like peeling an onion. It allows you to get more and more detail, more and more realism. So you can take into account small nuances, prepayments and other forms of risk. One of the important elements in the growth and development of the use of our risk management models has been computing technology. That's because once the computing technology is there, then problems that you previously knew how to do in principle, but you couldn't compute fast enough, suddenly become feasible.

BI: *In corporate America, and in non-financial companies especially, who is making the key risk decisions? Is it the CFO or is it the risk manager calling the shots?*

Merton: It depends on the corporation and its structure. I would say it's probably somewhat split. I'm sure in reality you have them collectively getting together. I would say that in a traditional corporation, the CFO, or perhaps someone that deals with the financial risks of the corporation, would probably be ultimately responsible for most of what are called "tactical applications" of the various risk management tools. That includes issues like hedging currency exposure, hedging interest rate exposure, hedging even equity exposure and commodities exposures. I think that generally that comes under the domain of the CFO.

That said, the strategic use of risk management will become much broader than the traditional CFO role. Thinking about the business side of strategy clearly takes into account risk, one way or another. In some cases it may grow to the point where we may see someone called the "chief risk officer" who is going to be a key corporate player in making risk decisions.

Say you have an oil company which has two of three of the components of vertical integration—crude oil fields and final distribution system for heating oil and gas stations—but it doesn't have the intermediate stage of refining, taking crude and refining it into oil. In the past, if the oil company made a strategic decision to vertically integrate, implementing that strategy would involve getting into the refining business, a decision driven by the CFO. The company probably wouldn't build a refinery, but buy a refinery. For a U.S. company, it might well mean getting into a refinery outside the United States.

Now say there's a contract where you deliver so much crude oil on one day and, with some lag—maybe a week or a month, whatever—you'll receive back some mix of heating oil, jet fuel, and gasoline, perhaps specified at the time that you deliver the crude, as a contractual arrangement. In other words, it's just a matter of pulling out a swap contract which says, "I'll deliver so many barrels of crude at one place, and you'll deliver so much gasoline or heating oil in another week or month."

Now if you step back for a moment, that's functionally refining, right? You're putting in one end. You're delivering crude and out the other end comes a refined product. Except that refinery is a synthetic refinery and you are not actually, physically doing the production. That type of strategic, rather than tactical, thinking might be closer to what a chief risk officer might do. This is a simple example, but you can just see that it's a way of absolutely implementing a strategic decision rather than merely a tactical one.

BI: *You spend a lot of time studying initial public offerings and other ways companies raise cash. Twenty years from now,*

do you see a diminished number of IPOs?

Merton: Yes, or at least a restructuring of how firms are set up. Firms won't have to necessarily be as big. I mean, there are a lot of other factors here, but I'm just pointing out that the prospect for the menu of controls that management will have for managing risk will have grown substantially. There will be many more tools in the kit. And I'm just saying that I think those tools will not just be used as they have in the past on a tactical basis, but could really influence the strategic decisions of the firm, the way a firm is organized, including whether it's private or public. So I think those are what I see as some of the bigger potential influences of the future.

BI: *Your work on risk management may seem complex to some people. Do you think that corporate managers have a handle on what you're talking about?*

Merton: I think the real experiential base of debt is developing among financial institutions. That's an overwhelmingly large base, and it's taken 20 years to get there. But there is enormous development using strategies, like ours, that are more academic. That said, I think what is really important is not only understanding risk management but also having the infrastructure to support risk management. Take cross-border swaps. It takes time to know whether they'll even hold up across borders. The laws are different in different countries, and what you might think is their way, when you write a contract, it may not be enforceable.

Those issues require a great deal of experience in risk management. The good news is we're getting an enormous amount of experience now, particularly in the financial services industry. We've built up the legal precedents and all of that. I recall a former student of mine back at MIT in the early '70s, who is now the CFO of a Fortune 500 company, adopting our options pricing strategy in a decidedly non-financial format.

One of the things she did over the years was to use the option pricing technology as a way of evaluating Merck's research and development on new drugs and the options of when to stop and so forth. I think the application of options technology and so-called real options dealing with production decisions, not financial ones, is growing.

But going back to the theme of how much expertise exists, I think it's probably not high and it's concentrated in a relatively small number of larger corporations. I also think it's something that's going to have to grow. And if there is opportunity, the person getting trained today has the skill set that her competitors will not. It's like the ATM machine. It took a lot of time for people to use ATMs; there was a lot of resistance. But once they've used them, they never go back. So once you've worked with options pricing strategies and other forms of risk management, and you see what you can do with them, it will be hard to go back. ●

Brian O'Connell is a frequent contributor to Business Ingenuity. His article on Internet service providers appeared in Issue 2.



Sithe Goes Green

The cover illustration for this issue depicts two views of the Mystic Station power plant in Everett, Mass. Sithe Energies purchased the plant from Boston Edison and plans to spend \$600 million building a new, 1,500 megawatt plant, scheduled to open in 2001. The project is one of several Sithe is planning in the state to create more efficient, environmentally friendly power generation.

Brownfields Turn to Green

New law promises to bring contaminated properties back to useful life | *by Brian Sullivan*





In August 1998, a group of dignitaries gathered at a contaminated site in the Dorchester section of Boston and watched Governor Paul Cellucci sign Massachusetts' new brownfields provisions into law. Many business leaders and local government officials say that single pen stroke may eventually become the act that created thousands of jobs and allowed some of the state's older mill cities to reclaim their heritage as industrial and commercial leaders, as well as reclaim some of their lost land.



"Today we have taken a huge step toward making Massachusetts a better place to live and work," Cellucci said after the ceremony. "This law will add fuel to the already red-hot economy by paving the way for the development of thousands of sites that have been abandoned, encouraging businesses to build, and creating new jobs for neighborhood residents."

That's not just a nice sentiment from a political speech; it is a belief held among the state's business community as well.

The law is going to put into play many properties that have been sidelined due to different kinds of environmental problems, according to J.P. Plunkett of Cushman & Wakefield Real Estate. "It's exciting from a broker's standpoint," Plunkett says. "It opens up a whole new door on properties that you can sell."

"It is one of the most important pieces of economic development legislation enacted in this state in the past 10 years," says David A. Tibbetts, Director of Economic Development for Massachusetts. Many abandoned, polluted sites around the state are going to be cleaned up and put back in circulation, Tibbetts says. This will be a real boon for the state's older urban centers that hold the majority of the 7,000 or so brownfield sites that have been identified.

Deirdre Menoyo, assistant commissioner for the Bureau of Waste Site Cleanup in the state Department of Environmental Protection, agrees. "This law makes it much easier for anyone to relocate in these wonderful New England downtowns that had been the centers of commerce for more than a century."

and banks to stay away from any site, no matter how little it might have been polluted.

"For years there was gridlock where buyers wouldn't even look at some sites," Plunkett says, "sites that were preeminently located and that were structurally sound but that had an environmental stigma attached to them."

The new provision makes allowances for people who might have bought the property but did not cause the pollution, and it gives liability relief to lenders who did not cause the pollution.

"It makes a lot of these sites that were previously unavailable, available," says Robert Rio, Director of Environmental Programs for the Associated Industries of Massachusetts. "It opens a lot of land."

The law will take pressure off greenfields, according to Tibbetts: "The more industrial sites we can clean up and reuse, the fewer apple orchards and meadows we will have to pave in order to make way for suburban industrial parks."

Three Categories of Relief

The law classifies owners, tenants, and lenders into three categories and gives varying relief to each.

The first classification is "eligible persons." Eligible persons are defined as owners of a property who did not cause the pollution and did not own the property at the time of the pollution. Eligible persons have to clean up a site to reach a "permanent solution," but do not have to clean the site all the way to meet residential standards. The only exception is when pollution affects groundwater.



Goulston & Storrs' Ned Abelson says the dividing line between what can be developed and what cannot be developed has moved. "It is not going to fix the impossible locations," he says, "but those in the middle that needed a little bit of a nudge..."

Liability Redefined

The mechanism for doing this is to limit who is liable for contamination at a site and to provide a number of developers, as well as cities and towns, with the financial ability to accomplish cleanup operations.

Under many older environmental laws across the country, including some of the original federal Superfund provisions, anyone who had any contact with a site, even if they arrived years after the original contamination took place, became a "potentially responsible party," or PRP.

The threat of becoming a PRP led many companies

With groundwater pollution the owners must perform a cleanup that will remove polluted materials from adjacent sites, if necessary, and make sure that pollution on their site will not migrate to other areas. The owners must show that polluted soil will be cleaned as well as possible and that any remaining problems will be forever sealed off from the public or from present or future operators.

"It doesn't require you to clean up every site so that you can play in the dirt or drink the water," explains Larry Feldman, Senior Principal of GZA Environmental, Inc.

The second classification under the law is "eligible tenant."

The main responsibilities for tenants are that they must keep the pollution confined and away from people, and that if they use any petroleum products or hazardous materials themselves they must prove they are not contributing to further problems at the site.

The third group that receives relief under the law is lenders. Basically, lenders are told that if they did not pollute a site, they are not liable for any cleanup.

The critical piece of the law is the provision that says that innocent parties will receive "up to a 50 percent tax credit for all cleanup-related costs associated with a permanent solution" to make a site developable, according to state officials. If a company meets the minimum requirements, it will receive a 25 percent tax credit; if it goes beyond the minimum requirements, it will be eligible for 50 percent, according to the Massachusetts Department of Environmental Protection (DEP). Tax credits may be carried forward five years.

Job Creation

An estimated 7,000 sites throughout the state may be eligible for some relief.

"I think it came out well," says attorney Ned Abelson, of the Boston law firm Goulston & Storrs. Abelson has represented a number of PRPs in cases including federal Superfund cleanups. He also was involved in the hearings on the current law and closely followed its progress through the Legislature. "It's nothing radical, but it is the correct step in the right direction," Abelson says.

loans are available, but only cities and towns can get the grants, and most projects will get a maximum of \$500,000 for cleanups and \$50,000 for assessment work. Projects designated as a priority by MassDevelopment, a quasi-public finance agency, are eligible for up to \$2 million. In order to receive a grant, a candidate must raise at least 20 percent in matching funds.

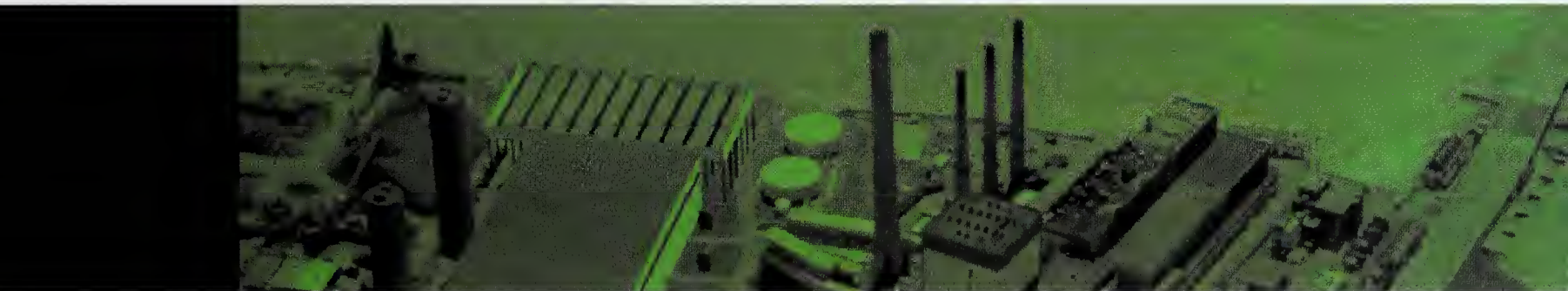
To be eligible for the program, the cleanup costs must be incurred between August 1, 1998, and January 1, 2005, and the costs must be more than 15 percent of the assessed value of the property.

Lowell's Eaton points to a similar federal program to show the promise that the state law holds. Under a pilot program set up by the U.S. Environmental Protection Agency, he says, the city was able to receive money to assess several sites in its historic downtown.

The end result of that work was the opening of two new sports complexes to house the University of Massachusetts at Lowell's sports teams, as well as two minor league professional teams.

Lowell Economic Development Officer Tom Galligani says this program allowed the construction of LeLacheur Park, home of the Lowell Spinners, the Boston Red Sox single-A team, and Tsongas Arena, home to the American Hockey League's Lock Monsters, which are affiliated with the New York Islanders.

Projects like these mean jobs, Eaton says, and under the provisions of the new state law he expects that these projects are just the beginning.



But to city and town officials in a state with a rich and deep industrial legacy, the law promises to yield spectacular results. "It is very important for a few reasons," says Glenn Eaton, Senior Economic Development Officer for Lowell. "In a city like Lowell that is mostly built out as far as structures are concerned, we don't have a lot of opportunity if we can't take a brownfield site and convert it back to either commercial or industrial use.

"Wrapped up in that goal is job creation," Eaton adds. The new law "gets jobs back."

Included in the law is the provision of \$30 million for cleanup and assessment work. Both grants and

"Something to Work With"

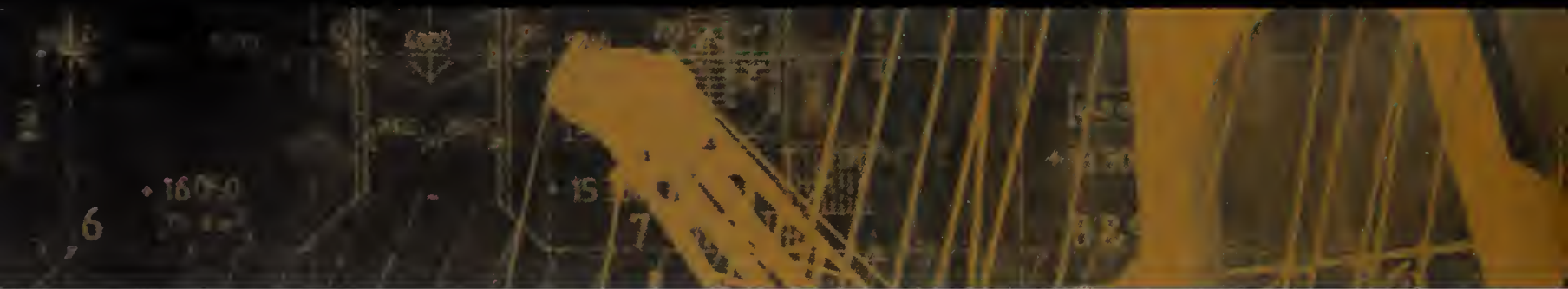
Further south, the city of Taunton is eager to put the new state law to use. Mayor Robert G. Nunes says the city received \$15 million from the federal government, which allowed 21 industrial and commercial sites to be put back on the market. He, too, says that this is just an example of what the state law can achieve. "The new law is crucial," Nunes says. "It will allow the city of Taunton and municipalities across the state access to state dollars. This gives us something to work with."

Cushman & Wakefield's Plunkett sees that happening.

The Incentives

- Up to a 50 percent tax credit for all cleanup-related costs associated with a permanent solution to make a site developable. If a company meets the minimum requirements, it will receive a 25 percent tax credit; if it goes beyond the minimum requirements, it will be eligible for 50 percent. Tax credits may be carried forward five years.
- Five percent state investment tax credit is available to businesses within Economic Target Areas on purchases of tangible, depreciable property (e.g. building and equipment).
- Abandoned building deduction allows a 10 percent deduction of the cost of renovations performed on any building that was at least 75 percent vacant for at least 24 months.
- Tax increment financing is a tax incentive of between 0 and 100 percent on the assessed value of improvements to buildings or property. TIFs can run for as many as 20 years or as few as five years.
- Pre-development assistance includes low-interest loans and grants for site assessment, traffic studies, and market studies.
- Tax-exempt industrial development bonds have a minimum funding of about \$1.2 million, up to a maximum of \$10 million. Up to 25 percent of the bond proceeds may be used on environmental remediation.

For more information, contact the Massachusetts Office of Business Development at (800) 5-CAPITAL.



He says he has had a site in Canton that no one would touch because it has the stigma of a potential environmental problem attached to it.

"It's a great property, in a great location, and a quality building, but it has been sitting vacant for two or three years," Plunkett says. "This is the type of property that will sell. And once we get some of the factories running and employees working, it will bring money into the local economy.

"It's just going to be good for everyone," Plunkett adds.

And while the law has great benefits by itself, it increases its potential when it can be used in conjunction

with existing state economic incentives.

For instance, both Taunton and Lowell have been designated Economic Target Areas (ETAs), which means in both of those cities, as well as in many others across the state, the state and local governments can grant added tax incentives to businesses that locate or expand within the targeted area.

Chelsea is another ETA. Given its location right across the harbor from Boston and just about a mile from Logan International Airport, Chelsea has used state and local economic incentives to aggressively recruit businesses and promote expansion.

Chelsea Planning and Development Executive Director Jay Ash has pushed through many projects under the state's economic development guidelines. He believes that number will only increase now that the brownfields law has become active. "Because Chelsea is near two major economic engines—downtown Boston and Logan Airport—any brownfields sites we have in the city, if cleaned, automatically become attractive."

Ash says the brownfields law allows a city or town "to overcome the first hurdle" in attracting business. The city can then come in with the added tax incentives to help the business build or expand.

Existing Incentives

Among the existing incentives that seem to naturally fit the brownfields package is the abandoned building provision, Ash says. Under that provision, if a company chooses to locate in a building that was 75 percent vacant for at least 24 months, it becomes eligible for a 10 percent abandoned building tax deduction.

The Executive Director of MassDevelopment, Michael Hogan, agrees with Ash. The existing state programs dovetail perfectly with the new brownfields law, he says, and businesses and individuals can take advantage of as many incentives as possible. A business could be eligible for an abandoned building deduction, a brownfields

"Most of my clients aren't interested in the finances," he says. The true impact of this law will be felt when companies realize they can get a piece of property they want without having to face liability for someone else's past errors.

The South Worcester Industrial Park is a good example, Feldman says. The location has rail access and is perfect for business development, he says, but has not received the kind of response one would expect from such a site because of its past problems. "Once the liability issues are taken care of, a lot more people will be willing to step in and do something," Feldman says.

Goulston & Storrs' Abelson says the dividing line between what can be developed and what cannot be developed has moved. A site has to be "catastrophic" now in order to be left vacant and unsold. "It is not going to fix the impossible locations," he says, "but those in the middle that needed a little bit of a nudge..."

Sites that businesses need to expand, maybe a building or lot next door that had been owned by another company but was contaminated, are now on the market again. The brownfields law will allow businesses to be more strategic in their purchases and look in terms of convenience instead of liability. "It could allow some property transactions to occur that are good for buyers and good for sellers, not to mention the state," Rio says. "You have people excited about developing and

Larry Feldman, Senior Principal of GZA Environmental, says the true impact of this law will be felt when companies realize they can get a piece of property they want without having to face liability for someone else's past errors.



credit, a 5 percent investment tax credit on equipment and building purchases, and savings under a tax increment financing (TIF) package, says Hogan, who previously served as the mayor of Marlborough.

Under a TIF, a tax incentive agreement can be made for up to 20 years and no less than five. Essentially, a TIF allows a city or town to waive a percentage of the new taxes that would have been levied because of improvements to a property.

Feldman, of GZA Environmental, says the impact of the brownfields law will go beyond just what financial measures are available.

redeveloping sites."

All in all, Massachusetts has gained an effective new measure in keeping its economy strong, and in helping businesses within the state expand and businesses outside of the state relocate to a more hospitable climate. As Abelson says, this law puts Massachusetts back out "in front of the curve." ●

Brian Sullivan is a frequent contributor to Business Ingenuity. His article on electric industry deregulation appeared in Issue 2.



Out of Time

Small businesses grapple with Y2K



by John H. Mayer

A couple of years ago, if you had asked John Healy about the Year 2000 problem, he probably would have shrugged his shoulders. "I was more concerned with using my computer to get parts out the door than anything else," says the president of Coventry Spares, a five-employee supplier of antique British motorcycle parts in Holliston, Mass.

That suddenly changed about a year and half ago, when Healy's brother came back from a trip to Florida and told him how he had almost been stranded at the airport. As a resident of Maine, his brother was one of a minority of drivers who came from a state with a Y2K-compliant vehicle registration and licensing system. When he showed his Maine driver's license with its "00" expiration date to the rental car company in Florida, the company's computer choked. "The people at the rental car company had never seen a 00, and when they inputted the number into the computer, it just said incorrect date," recalls Healy.

Since then, Healy has been on a Y2K mission. He had his computer consultant check out his Macintosh systems for Y2K compliance, update his aging IBM PCs, and replace his company's primary eight-station Unix server. In the process he spent about \$15,000. "I'm kind of over the hump now, and I know exactly what I have to do to make sure my business will run," he says.

By most accounts, Healy is not your average small businessman. While a majority of larger firms seem to have grasped the potential impact of the Y2K issue and have already launched programs to fix the problem, the message apparently hasn't percolated down to smaller businesses. Most have yet to start Y2K projects.

A study last year by market research firm Gartner Group found that 88 percent of all firms with fewer than 2,000 employees haven't even started their Y2K projects.

More recently, a survey of 500 small businesses by Wells Fargo Bank found that while 80 percent were aware of the problem, only 46 percent planned to take steps to correct it. Even the Federal Reserve is predicting that up to 7 percent of all small businesses will fail due to the Y2K problem.

"It's a serious problem," sums up Val Asbedian, Director of Strategic Planning in the Year 2000 Program Management Office at the Commonwealth of Massachusetts Information Technology Division. "Small businesses aren't taking the issue as seriously as they should, and they could be hurt either because they have a Y2K problem or because one of their suppliers or business contacts has a problem." Asbedian's organization is playing a leading role in encouraging state government agencies to resolve their Y2K problems and ensure that government computing resources will operate normally after January 1, 2000. He also speaks frequently to local Chambers of Commerce and business groups, and his organization offers extensive resources on its Web site (www.magnet.state.ma.us/y2k).

"It's the nature of small business," observes David Eddy, a Y2K consultant based in Needham, Mass. "Their priorities are the next phone call, the next customer, and meeting payroll this week. They usually don't have an MIS department or an in-house programmer. And many still believe Bill Gates is going to come up with a \$39.95 fix."

"Our sense is that small business preparedness is almost non-existent," agrees John O'Mara, Executive Director of Citizens for Y2K Recovery, a volunteer group based in Northborough, Mass., that is attempting to get communities across the country up to speed and sharing information on the Y2K issue. "It's really unfortunate because they have the ability to make it right, in most cases, fairly quickly and at minimal expense."

In fact, it is local, grassroots organizations like Citizens for Y2K Recovery, many of which are preparing

their communities for catastrophic disruptions in such basic services as electric power, telephone service, and food distribution, that are having some of the greatest success bringing attention to the Y2K issue. One of the more progressive communities in Massachusetts on the Y2K problem is Lowell. Much of the effort there has been driven by Ian Wells, a software engineer and executive director of the Belvidere Neighborhood Association Year 2000 Preparedness Committee. An outgrowth of a small neighborhood watchdog group, the committee's goal is to educate the community and ensure that no firm in Lowell goes bankrupt as a result of Y2K.

"Finding out how to solve the problem is easy; there are many good sources of information," Wells says. "Getting people to accept that there is a problem in the first place is the difficult part."

Wells has been instrumental in raising community awareness on Y2K by speaking tirelessly one-on-one with business and political leaders and church and neighborhood groups. He also gets the word out and promotes discussion by hosting an informal Thursday morning meeting at a local diner and discussing the subject on a five-minute, Sunday morning local radio spot.

His relentless effort has begun to pay off. In August, Lowell held a Y2K Action Day for businesses that included a proclamation from the mayor of the city. More recently, Wells has moved his informal Thursday morning meetings to a larger location, and they are now broadcast on a local cable channel.

Fatal Decision

The root of the Y2K problem lies in a decision made by programmers many years ago to adopt a two-digit convention to represent the year. Speculation about why this decision was made has ranged from an effort to save expensive memory to a simple oversight.

Whatever the cause, representing the year with two

digits instead of four will cause a wide variety of failures in any application running arithmetic calculations, comparisons, or sorts of date-based data. Unmodified software will assume that the maximum value of a year is 99 and roll over the date to 00. Since programs will assume 00 is less than 99, dates that should be read as the year 2000 will be interpreted as 1900. In one early sign of the potential impact of Y2K, a 104-year-old Minnesota woman was sent a letter welcoming her to kindergarten. The local computer had interpreted her "89" birth date as 1989.

Unfortunately, the inability to differentiate between dates in the 20th century and dates in the 21st century will have a much more profound impact than kindergarten classes. It will affect planning and scheduling systems, human resources systems, financial and billing systems, and a wide range of other programs. Errors in software could affect a company's cash flow, inventory calculations, taxes, interest payments, financial forecasting, and customer relations.

But it isn't simply an IT problem. If Y2K is not rectified, businesses' and government's increasing reliance on computers will lead to disruptions in electric power systems, gas and water delivery, telephone service, transportation systems, and national defense, and some people believe it could contribute to a worldwide recession.

Moreover, the problem isn't restricted to large mainframe computers. Code running on PCs and servers suffers from the same problem. The Y2K issue will force companies to rectify their PC BIOS, embedded firmware, operating systems, security systems, database management systems, and spreadsheets. Some popular applications, such as the personal finance package Quicken, were only made Y2K-compliant last year.

From the small business perspective, Y2K could easily mean bankruptcy. Firms that don't take the appropriate steps may find that they can't retrieve their accounts



Partnership Assistance

The Massachusetts Manufacturing Partnership (MMP) can assist companies in becoming Y2K-compliant by providing information, decision support, and technical assistance. Typical steps include:

- Evaluating exposure to Y2K liabilities, including manufacturing information systems, embedded automation, process control, testing equipment, and EDI, as well as supplier and customer interfaces.
- "Walking the floor" of a company to identify and record potential problems.
- Providing customized worksheets for documenting potential hardware/software problems, solution sources, problem tracking, etc.
- Assisting with the development and documentation of the company's mediation plan.
- Assisting with the development of a letter for notifying customers of the status of remediation efforts, as well as providing resources for resolving network issues.
- Assisting with the presentation of the remediation plan to customers, owners, bankers, etc.
- Assisting with the selection of new MIS software, if preferable to repairing outdated systems.

MMP can help with all of these issues and more. As part of a national network of manufacturing extension centers, MMP customizes processes and can access resources both locally and nationally for Massachusetts manufacturers. It can be reached at (888) 667-6348.



receivable records or that orders scheduled for delivery in year 2000 are listed as filled. They may find employee withholding for taxes or insurance premiums inaccurately calculated or inventory records lost. Equipment failures may result as well. Photocopiers or fax machines reliant on microchips that fail to recognize the year 2000 as a valid date may suddenly stop working. And insurance companies may not step in to help, because they may insist that this is all a preventable problem.

To make matters worse, organizations that will begin the fiscal year 2000 before January 1, 2000, have to have their systems Y2K-compliant months earlier. Federal and state agencies, in particular, must mount a serious effort over the next several months.

Develop a Plan

What should a small business owner or executive do? The first step, say the experts, is to make Y2K a top priority in your business. With only a few hundred days before January 1, 2000, time is running out. "If you're a big enough company, create a Y2K project team or office," suggests William Ulrich, President of the Y2K consulting company Tactical Strategy Group and a frequent speaker at Y2K conferences. "Then the key people in the company can get together and decide how they can allocate resources to address this problem."

The next step is to assess your computing resources. Draw up a list of your systems and software and prioritize them by their importance to the success of your business. "It's often helpful to write a list with the application and the business impact it will have if it fails, and then set deadlines for fixing those projects in order of importance," adds Ulrich.

Since most small business owners or executives are short on time and the millennium is fast approaching, the emphasis should be on the mission-critical functions, say consultants. "Focus first on the core accounting-oriented functions, such as payables, receivables, inventory, and record-keeping," says Eddy. "Are your applications current and Y2K-compliant? Have you heard from the vendor recently?"

Unfortunately, many small businesses rely on custom



software for important applications. "If your cousin George wrote the thing for you 15 years ago, you've probably got a serious problem," admits Eddy.

Once systems have been repaired, experts recommend a rigorous testing process. The best way to see if a system is Y2K-compliant is to run the systems with a 2000 year date. But make sure you don't just test systems in isolation. Networks and vendor-supplied software should be tested as well.

Costly Endeavor

One of the biggest challenges small businesses face will be coming up with the money needed to address Y2K remediation. Giga Information Group, a market research firm based in Cambridge, Mass., estimates that the cost of remediating desktop systems will average anywhere from \$300 to \$700. The firm also estimates that the cost of updating old COBOL code will run between 80 cents and \$1.40 per line. Some experts suggest that equipment needing more than \$400 to upgrade probably should be replaced.

But that may not be an option for small businesses. While the SBA is offering some assistance for small and disadvantaged firms, few sources of funds are available. "Many of the little guys are simply unable to put money on the table to afford consultants like me," says Eddy.

To address that dilemma, Eddy has recently renamed his company Y2K Service Corps and is attempting to convince larger firms to finance a large group of Y2K-trained experts to help small businesses address their problems. "We need large numbers of trained Y2K teams to go around to small businesses and ask, 'What are you doing about Y2K?'" says Eddy. "What are your contingency plans if you have to shut down when one of your prime suppliers or customers fails to perform? Let me help you go through a directed risk assessment."

Whether anyone can implement such efforts quickly enough remains an open question. "We can't afford to ignore the problem any longer," says O'Mara. "Time is running out."

John H. Mayer is a freelance technology journalist based in Belmont, Mass.

Seven Steps to Tackle Your Y2K Problem

1. Make fixing the Y2K problem a top priority in your organization.
2. Conduct an inventory of your hardware and software assets.
3. Develop a list of non-compliant applications within the company.
4. Rank the problem applications and systems in order of their importance to the survival of the company.
5. Develop a compliance plan that defines which systems, including desktop systems, must be fixed. Make sure you allocate enough time before January 1, 2000 to both fix and test your systems.
6. Set aside the money needed to finance the remediation effort.
7. Develop a contingency plan in case one or more of your key suppliers or customers is affected by Y2K. ●



—J.H.M.

On-Line Help

www.state.ma.us/y2k

The Commonwealth of Massachusetts offers various types of assistance to small businesses in the state. This site lists many resources, including a sample Year 2000 project plan.

Taunton Changes with the Economic Times

Brian Sullivan

SOUTHEAST

If you've ever played Monopoly, chances are you have held a piece of Taunton in your hands. Between the mid-1950s and the early 1980s, all the houses and hotels used in Monopoly, as well as the pawns used in Sorry and Clue and other Parker Bros. games, were made in Robert W. Boyden's father's factory in Taunton.

"We used to be really big in real estate," Boyden says with a laugh. "We made 100 million houses and 40 million hotels."

In the early 1980s Boyden's family sold the business to General Mills, which had acquired Parker Bros. (Hasbro now owns the company.) By that time the family was out of the real estate business. But, as it turns out, not out of the plastics business. Boyden bought a mill across town and opened Boyden Molding, Inc. Among the products it makes are the double-ended plastic spoons that go into each box of Scott's Miracle Grow fertilizer.

Boyden's ability to change and reinvent his company is a talent he shares with his hometown. Over the years, the people in this city of

52,000 in southeastern Massachusetts have constantly changed with the economic times to remain successful.

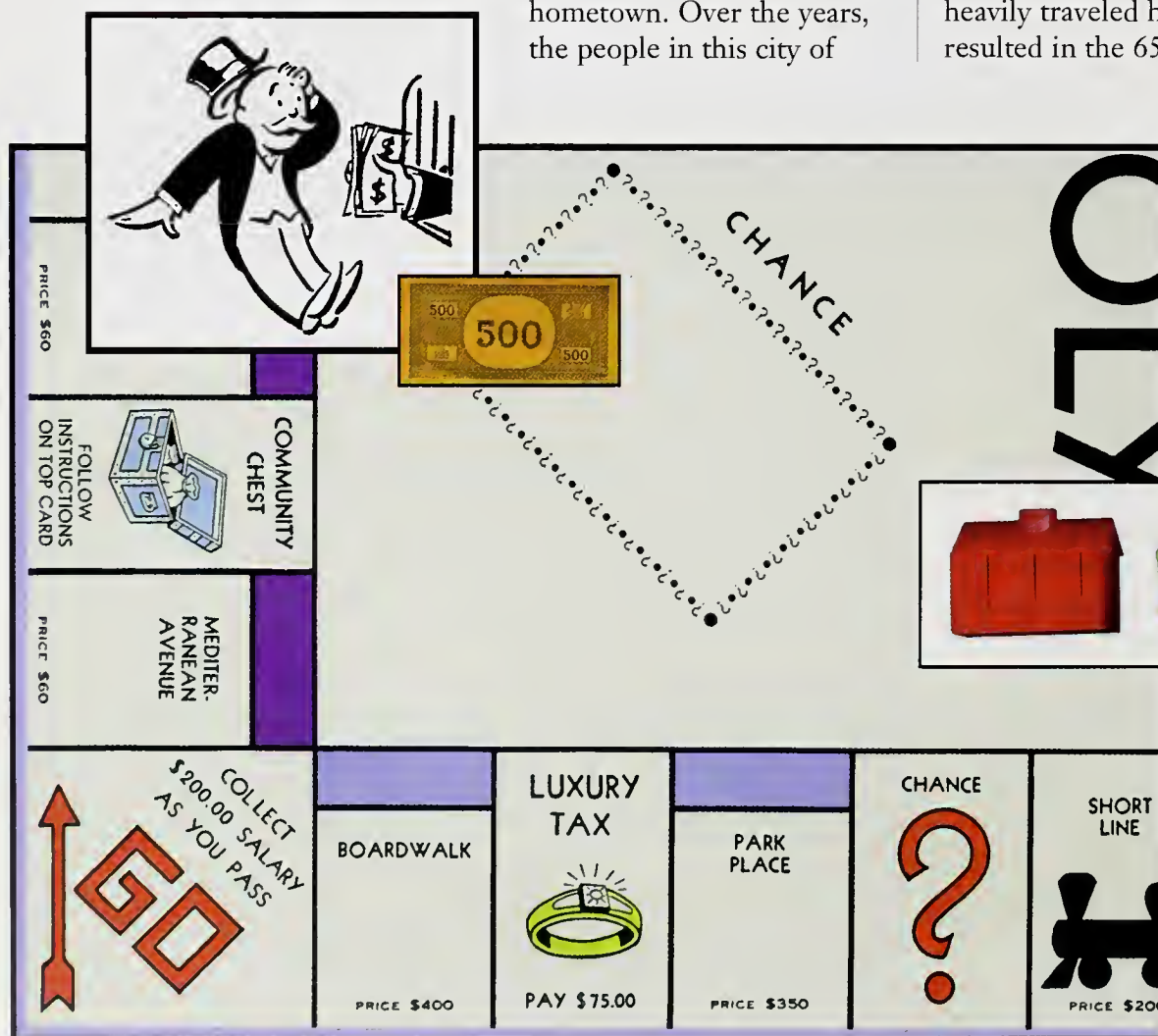
Though it is miles from the coast, Taunton was once the third-busiest seaport in New England. Well into the 19th century, clipper ships sailing up the Taunton River from Fall River and Mount Hope Bay used the city as a prime winter port. With the rest of New England, Taunton saw the rise of the textile industry in the 19th century, as well. But Taunton developed a diverse economy beyond textiles. Manufacturers, including Reed and Barton, were producing so much silverware, sterling silver, and pewter ware that Taunton earned the nickname "Silver City." And Taunton became a world center for locomotive production after local machinist William Mason introduced new methods of building them.

Today the city's legacy of diversity continues.

Years before the state completed Interstate 495 through southeastern Massachusetts, local business and political leaders realized that its junction with Route 24 would put Taunton at the crossroads of two of the most heavily traveled highways in the state. Their foresight resulted in the 655-acre Myles Standish Industrial Park, which has its own exit on I-495.

The park is unique because it comprises a series of pre-approved lots that are sold and governed, not by the city, but by the Taunton Development Corp. Mayor Robert G. Nunes insists that, while he and a city councilor have seats on the corporation's board, the real decisions about the park are made by business leaders. That makes the process of siting, building, and operating a business easier. "Local businesspeople make the decisions," Nunes

Between the mid-1950s and the early 1980s, all the houses and hotels used in Monopoly were made in Robert W. Boyden's father's factory in Taunton.





Lots in Phase II of Myles Standish Industrial Park are almost sold out, and Phase III is under way.



says. "It keeps it out of the political arena."

In addition to having all the necessary, pre-approved permits, each lot is hooked up to sewer, water, and electricity, and the park is served by Conrail, says Richard Shafer, Director of the Mayor's Office of Economic Development. For some businesses the entire process, from choosing a site to opening the doors, can be accomplished within "a single construction season."

U.S. Assembly New England, an electronics manufacturer, was opened in 14 weeks, according to Shafer, and Chadwick's of Boston, a catalog clothing firm, picked out a location in October and opened the doors of a 300,000-square-foot facility the following April.

Among the more than 75 other companies that call Myles Standish home are Bell Atlantic, Drakes Bakeries, GTE Governmental, Tropicana, and the Learning Center. Shafer says the first phase of the project is full, all but a handful of the lots in the 218-acre second phase have been sold or built out, and work is now beginning on the third phase.

"Myles Standish Industrial Park is a smashing success," says Boyden, whose plant is actually in an old mill building a few miles away. And that again points to Taunton's diversity. Nunes says the city, working closely with the Massachusetts Office of Business Development (MOBD), has included the entire region in an Economic Target Area (ETA). That means businesses relocating, expanding, or creating permanent new jobs here qualify for a 5 percent state investment tax credit. Other advantages include tax increment financing (TIF), a five- to 20-year tax incentive based on a property's increased value

brought about by improvement. The program also has allowed the city to take advantage of another of its resources, its old mill buildings. State laws provide more tax incentives to businesses that redevelop abandon buildings. "More than 1,000 jobs have come from these programs," Nunes says, and he predicts more to come.

"We'll go anywhere and talk to anybody," says Joseph I. Quinn, President of the insurance firm Allan M. Walker & Co., Inc. Quinn became the first chairman of the city's industrial development commission in 1963 and serves on the board that oversees Myles Standish. In his office above High Street, with a poster of Bobby Orr's Stanley Cup-winning leap on his wall, Quinn talks business and talks Taunton. The people of the city are among its greatest assets, he says. "They give a good day's work for a good day's pay." There are 169 manufacturing, service, and distribution industries in Taunton with 9,647 employees. Shafer says the city has one of the highest numbers of manufacturing employees in the state.

Both Quinn and Shafer say the city recognizes the need for a well-educated, well-trained work force and has entered into partnerships with Bristol Community College and the University of Massachusetts at Dartmouth. "In manufacturing, there is no such thing as an unskilled worker," Quinn says.

Again, Quinn says, so much of the success comes from the people, people who plan for the future and remember the past, people who are dedicated to their city. From the local government leaders to the people on the street, Quinn insists, "we want business and we want industry in this city. ●

New Balance

Sets the Pace for Expansion in Boston

Pam Picard

It was no surprise to those in the Boston business community that New Balance Athletic Shoe, Inc., an employer of some 1,600 workers worldwide and a local economic institution, was starting to look for a better fit.

The idea that New Balance, one of the nation's top manufacturers of athletic footwear, wanted to expand was both good news and bad news. It was good to hear that the 92-year-old company, which employs about 300 people locally, might increase jobs and revenue. But it was bad news to hear that executives were considering a move out of state. It seems that even though they wanted to stay in Massachusetts, executives had to think about packing up their jobs and good reputation and heading north.

"We wanted to stay here," says New Balance Chairman and CEO Jim Davis. "This is where there is a large workforce, and we didn't want to disrupt that. But there were incentives to go outside the state."

Executives realized they could cut costs, both in terms of wages and taxes, if they moved to Maine. But then the Massachusetts Office of Business Development (MOBD) stepped in and worked with the City of Boston to give New Balance plenty of reasons to stay here.

"We rely on the support and cooperation of a number of partners to identify those companies that may benefit from our assistance," says Bruce Stebbins, Director of Business Development for Massachusetts. "The Boston Redevelopment Authority [BRA] is one of those partners, and it helped organize the initial meeting with New Balance to move this project forward."

"New Balance will use this multi-million-dollar facility to produce more of the latest in top-quality sneakers, while also creating jobs and adding fuel to our economic engines."

— Governor Paul Cellucci

The combined efforts of the state, city, and county resulted in a package that made it feasible for New Balance to stay in Boston. The company's interest in moving to the former Bull Electronics building in the Brighton Landing part of Boston made the deal even easier. The state has designated that part of the city as an "economic opportunity area." When a company agrees to make improvements to a property in such an area, the city can offer special tax incentives. After the company broke ground on the new facility in March 1999, Davis says, it will begin its goal of expanding 20 to 25 percent, which in turn will add even more jobs and more revenue to the city and state.

"It's very important to have these tools available so you can be at the table," Robert H. Baldwin Jr., Deputy Director of Industrial Development for the Boston Redevelopment Authority, told the *Boston Globe* in June. "If you don't have the right real estate and right over-see climate, you are not going to buy them into the city with the tax breaks, but it's important to have those available."

They eventually worked out a plan that New Balance could, and did, say yes to. Davis says it wasn't the only reason the company decided to stay, but it was the "icing on the cake."

"Massachusetts is catching up," he says about the state's efforts to provide economic incentives to companies that want to locate here. "The state was really behind the eight ball. If things had not changed over the past eight or nine years, we would not be here today."

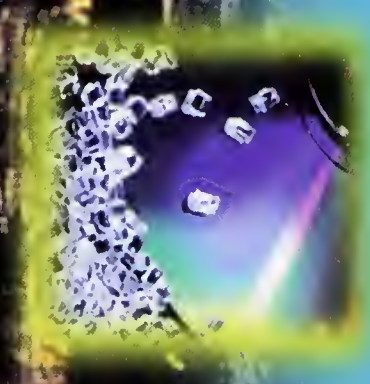
"One of the key tools that we aim to provide New Balance is the Economic Development Incentive Program [EDIP], which offers enhanced state and local tax incentives to help retain businesses and attract investment," Stebbins says. "New Balance is familiar with EDIP benefits since they used the program for an expansion they undertook in Lawrence [Mass.] a few years ago."

The effort paid off. In June, Davis, along with Governor Paul Cellucci and Boston Mayor Thomas Menino, officially announced the relocation of the company's manufacturing facilities and corporate headquarters, which will fill more than 100,000 square feet.

"New Balance will use this multi-million-dollar facility to produce more of the latest in top-quality sneakers while also creating jobs and adding fuel to our economic engines," Cellucci said at the time of the announcement. "I am pleased that the state and the City of Boston c

Berkshire County

The Perfect Mix of Business and Pleasure



MASSACHUSETTS
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The Berkshires:

A Natural Choice

Western Massachusetts displays old New England charm and modern business diversity

by Bob Woods

A businessman recently told a story about driving through the Berkshires with his son. It was the height of "leaf-peeping" season, and they were heading west on the Massachusetts Turnpike, not far from the Berkshire County town of Lee. The brilliant foliage along the rolling hills and forests was in full color, dominating the landscape as it did hundreds of years ago. Maybe that's what prompted the child to ask, "Dad, does anyone live here?"

The father assured his son that, indeed, plenty of people live in the Berkshires, and have done so happily and prosperously since Colonial days, when the region emerged as one of New England's key industrial centers and home to such historical figures as Herman Melville and Susan B. Anthony.



What he did not realize, though, was just how vibrant the Berkshires are today.

A single, vast county of 945 square miles, Berkshire County comprises 32 communities strung along the western edge of Massachusetts, bordered by New York to the west, Vermont to the north, and Connecticut to the south. The population of about 135,000 is thickest in the county's two cities, North Adams and Pittsfield. The Berkshires' bucolic mountains have long been a cultural mecca, notably Tanglewood, the

world-famous music venue, and Stockbridge, where Norman Rockwell became America's artist. The Berkshire Visitors Bureau touts the region as "America's Premier Cultural Resort."

Hidden to many casual passersby is the robust business landscape that thrives in the Berkshires. Heavy industries such as paper, plastics, and electronics manufacturing are still firmly rooted in the area, but today they exist alongside high-tech enterprises that create things like Internet Web sites and movie special effects.

Berkshire County is one of those rare places in this country where quality of life is as prominent as the fortunes of enterprise. With its year-round natural wonders, incomparable cultural cornucopia, and diverse commercial climate, the Berkshires is a model of American life for the new millennium.

North Adams Morphs Into Modern Hub

The flourishing community around North Adams typifies today's Berkshires. Surrounded by remnants of the manufacturing that thrived there (since-departed Sprague Electric once employed 4,000 people), the city is morphing into a 21st-century hub. Downtown's fledgling Massachusetts Museum of Contemporary Art (Mass MoCA) is a 12-acre, 27-building complex, formerly a gargantuan

The Berkshires location provides a critical link for manufacturing and distribution throughout Massachusetts and neighboring states.

electronics factory, now taking shape as a spacious habitat for culture, entertainment, and business. More than \$25 million in state and private funds are helping convert an abandoned factory into a world-class showcase. Mass MoCA will officially open in May, 1998, but part of the facility is already complete. Phase I, which encompasses 190,000 square feet of space, includes: art galleries; performing arts facilities; rehearsal spaces; office spaces; fabrication facilities; live studio space for artists-in-resi-

dence; pre- and post-production facilities for multi-track audio, video, and film; and restaurants, cafes, and retail shops. The visual and performing arts will be the main focus at Mass MoCA—especially with the influence of nearby Williams College and the Clark Art Museum, as well as Tanglewood, Jacob's Pillow Dance Festival, the Norman Rockwell Museum, and other cultural entities within the county—but the site is seeking high-tech business residents, too. One that's already up and running epitomizes not only the mixture sought at

The Massachusetts Museum of Contemporary Art (Mass MoCA) is a 12-acre, 27-building complex, now taking shape as a spacious habitat for culture, entertainment, and business.

Mass MoCA, but the future of the Berkshires.

Kleiser-Walczak Construction Company moved into Building One at Mass MoCA about two years ago. Despite a name that conjures images of bricks and mortar, Kleiser-Walczak is an emerging force in the special effects industry, a Hollywood activity that has gained an intriguing foothold in western Massachusetts. "We were going to come here for just a year and then go back to L.A.," confesses owner Jeff Kleiser, "but we decided that this is a better place to raise our kids."

Kleiser and his partner, Diana Walczak, were drawn to the Berkshires in 1992 by Doug Trumbull, a West Coast effects wizard whose projects include *2001: A Space Odyssey* and *Close Encounters of the Third Kind*. Trumbull moved to Lenox in 1989. Kleiser and Walczak teamed with Trumbull, who still operates a facility nearby, on several projects before setting up their own shop, currently employing about 40 people, to produce effects for movies, theme parks, and commercials. Among Kleiser-Walczak's film credits are *Judge Dredd*, *Mortal Kombat: Annihilation*, and *Clear and Present Danger*. The company's latest endeavor is Synthespian Studios, which specializes in fabricating computer-animated actors.

"We've been lucky to find people burnt out on L.A.," Kleiser says of his talent pool. He notes, however, that nearly a third of his workforce has been hired locally. "This is a great place to live, and we're so excited about being at Mass MoCA. We wouldn't give this up unless we had to."

Amalgam of Public and Private Interests

John Barrett, who became mayor of North Adams 15 years ago, wouldn't give it up either. "The day I entered office in 1984, there were still 1,800 people working for Sprague," says Barrett of the company that soon thereafter faded away

and left a trail of unemployment. But North Adams revived itself. "We recognized that we had hit rock bottom, that we had been a one-industry community for 50 years and that it was time for a new strategy."

The result is a revitalized community—government, unions, the private sector, banks, and other integral players—pulling together to survive. A good example of what's been accomplished is the Adams Corporate Park, an old factory site redeveloped by the Northern Berkshire Industrial Park and Development Commission, an amalgam of private and public interests. Today the site houses four small manufacturers, with room for six more. "We're looking for companies that are ready to move quickly," says Commission Chairman John Lipa.



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"We're good at short-cycle development. The commission is also working to develop another industrial park about halfway between Adams and North Adams, which we hope to open in a year or so."

Besides developing the physical sites where existing companies can operate, other forces are busy developing entirely new businesses. The Berkshire Capital Investors, for instance, is a \$5 million venture capital fund investing primarily in high-tech enterprises. Investments include Tripod, an Internet media company in Williamstown employing about 70 people, and Berkshire Wireless, which builds towers for wireless communications. "Berkshire Wireless is a perfect example of why doing

sending gigantic data files to its offices in New York and California.

A solution is on the horizon through the joint efforts of the Berkshire Regional Planning Commission, the Massachusetts Technology Collaborative, and the state Department of Economic Development. They have established a project called Berkshire Connect to get the region up to speed so it can serve the increasing telecommunications needs of the business, education, and government users. "We are working very hard on creating a solution that drastically reduces the price and improves the service," reports Nathaniel Karns, Executive Director of the BRPC and spokesman for Berkshire Connect.

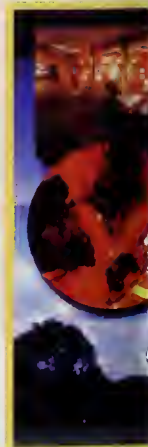


business in the Berkshires makes sense," states Matthew Harris, Managing Director of the fund. "The owners are local people who were doing business in Boston and decided to come home." They first approached Matt Kerwood, Regional Director for the Massachusetts Office of Business Development (MOBD), "and he oriented them to us and other community resources," says Harris.

"The quality of life here can't be beat," he adds, while acknowledging that the area has to deal with certain realities in staging its business renaissance. "The [perception] that it's tough to run a product business is real, but you can make money here on other things. We think about businesses that rely on intellectual capital rather than physical capital."

One obstacle—now being addressed—is the lack of an adequate high-speed telecommunications infrastructure. Getting affordable access to super-fast T1 lines in order to transmit huge amounts of data is a nagging impediment to growth. Kleiser-Walczak had to bite a very expensive bullet and install its own telecom system for video conferencing and

In 1995, Interprint expanded to 7.5 acres, securing its position in Pittsfield with the purchase of the nearby three-story, 75,000-square-foot Russell Building built in 1863 (above). Entertainment Design Workshop (right) creates special effects from its office in the South County town of Sheffield.



Options currently being considered include a cooperative investment among users in upgrading the telecom system, and the creation of a public "utility service that physically installs, operates, and maintains an infrastructure," says Karns. "Realistically, it will probably be within 12 months that we have at least an interim solution that improves the situation," he estimates. "In no more than two years we'll see something that solves the problem."

The Promise of Pittsfield

High-tech industries that demand such services are clearly important to the economic growth of the Berkshires, yet that doesn't mean the Berkshires' largest city, Pittsfield, is about to renounce its long association with manufacturing. Pittsfield is world headquarters for GE Plastics and several other large corporations, including Kay Bee Toys. The other part of Pittsfield's manufacturing base, says MOBD's Kerwood, is "the mom-and-pop plastics shops, 25- to 75-worker molders that make up a substantial part of the economy."

The Berkshire Plastics Network is helping to assure that Pittsfield and the rest of the region maintains that part of the economy. It is an association of 43 companies in the county. "Our original intent was to be a marketing tool to attract business as a whole," says Donald Rochelo, President of the Network, "but as time went on, we found it could help in a variety of ways." With growth projections indicating that the Network's workforce of about 2,000 might double in the next five years, training is a huge issue, so the network is working with high schools to acquaint students with the latest computer-aided design techniques.

Interprint is another major player in Pittsfield and subject to the same types of employment concerns. A \$50 million U.S.



The Berkshires combine natural beauty, economic power, and as the outdoor cafes suggest, cultural sophistication.



subsidiary of a German parent company, Interprint is a world leader in printing decorative papers for the laminating industry, such as Formica countertops and wood grains for furniture. "In January, we announced that we are spending \$25 million to expand our operations," says Interprint President and CEO Bill Hines, who credits MOBD with implementing economic incentives that spurred the move. The expansion means adding to its 80-person workforce.

"We're working with MOBD, running newspaper ads, and visiting local colleges," says Hines of Interprint's search for new hires. "We want to make this an area where people can come in and train in specific technologies."

At the same time that large corporations have been downsizing, forcing people to look elsewhere for work, plenty of new jobs are opening with expansions like Interprint's and the emergence of new businesses.

This fall, downtown Pittsfield received two economic boosts that exemplify the area's upward trend. On September 24, General Electric agreed to a settlement to clean up PCB contaminants resulting from its former operations in the city. The company had been in negotiations for several years with the city, as well as state and federal environmental agencies. The settlement also clears the way for reuse of a portion of the valuable 245-acre parcel in the heart of Pittsfield where the GE plant was located. The newly created Pittsfield Economic

Development Authority will administer the redevelopment.

"This opens a huge door for the city," says MOBD's Kerwood, stating that everything from zoning to rail services is already in place. "The beauty is that there could come a time when Pittsfield could once again have 10,000 people working here, but for 10, 12, or 32 companies instead of just one. We've already had several inquiries from companies thinking of locating here."

Less than a week later, Pittsfield received further good news, this time regarding its Central Block project, a \$5.3 million renovation of the former J. J. Newberry's building into 46,000 square feet of office space and 8,000 square feet of retail and restaurant space. On October 6, a division of Berkshire Health Systems announced that it would become the first tenant, taking about 25 percent of the space in the downtown building.

The Central Block project is a \$5.3 million renovation of the former J.J. Newberry's building into 46,000 square feet of office space and 8,000 square feet of retail and restaurant space.



BERKSHIRE HOUSING DEVELOPMENT CORP.

Success in South County

Economic expansion is taking place a bit farther to the south, too, where the Lee Community Development Corp. is having an impact. The organization was formed in 1994 and joined with four local businesses to buy a 130,000-square-foot building in Lee. That building is now filled with tenants, and the CDC has just opened an industrial park on Route 102 "with 10 pristine sites," as described by CDC Chairman John Toole. "We have a complete infrastructure," he adds, "from sewers to a fiber-optic shed for telecommunications." While courting small paper and plastics makers and the burgeoning special effects business, Lee's CDC is also nurturing agricultural technology. Two beneficiaries are Berkshire Ice Cream, a cows-to-processing operation, and the Berkshire Growers' Cooperative, which is working with the CDC to export squash to Europe.

The CDC of South Berkshire County is working with the towns of Great Barrington and Sheffield to assist self-employed residents who run businesses out of their homes. Recognizing the growing importance to the local economy of home-based

enterprises—those employing five or fewer people—the CDC is implementing a \$400,000 Ready Resource Grant program to help low- and middle-income applicants upgrade residential housing that also is used for existing business purposes. "The program, which we believe is the first of its kind in the state, intends to address substandard conditions and code violations," says Keith Girouard, Executive Director of the CDC. The money will help the businesses upgrade electrical systems, weatherize, and make corrections to superstructures.

Following a lottery application process, Girouard expects to award 10 to 12 grants, of up to \$20,000 each, to qualified businesses by the end of 1998. "It's quite a diverse group," he adds, operating businesses such as jewelry design, office supplies, landscaping, antiques, arts and crafts, day care, and construction services. "This is also a wonderful way to address job creation in the area, while maintaining its pristine quality."

Like the aforementioned businessman, unsuspecting travelers driving through the beautiful Berkshires probably won't spot zucchini farms or plastics molders or Web site developers amid the lush landscape. But they are there, coexisting with the natural, historical, and cultural wonders of this multifaceted county. ■

Berkshire County EDIP Projects

The state's Economic Development Incentive Program (EDIP) allows cities and towns to offer enhanced tax credits to businesses and communities. The Berkshires have used this program to attract and retain many enterprises in the county. Here is a list of certified projects as of November 1, 1998.

Company	Jobs Created	Jobs Retained	City/Town	Industry
Beloit Corp.	15	10	Pittsfield	Manuf./paper-industry related
Berkshire Bank	8	35	Pittsfield	Banking
Berkshire Ivy Gardens	10	45	Williamstown	Wholesale grower of ivy house plants
City Savings Bank	31	114	Pittsfield	Banking
Crescent Cardboard Co.	25	25	Lee	Manuf./cardboard products
Crown Vantage	1	106	Adams	Manuf./fine specialty paper manufacturing
Dayspring Realtors & HIS Management	1	4	Pittsfield	Real estate
DelfTree Corp.	11	19	North Adams	Shiitake mushroom cultivator
Frosty Mechanical Contractors	6	30	Pittsfield	Plumbing contractor
Greylock Federal Credit Union	36	37	Pittsfield	Banking
Interprint	79	51	Pittsfield	Printing decorative papers for laminating industry
Litchfield Financial Corp.	70	—	Williamstown	Commercial financier of vacation properties
Pittsfield Mold & Tool Co.	23	45	Pittsfield	Manuf./molds for plastics industry
Renfrew Center	70	39	Adams	Industrial condominium
Van Alstyne Associates & HIS Management	7	6	Pittsfield	Insurance

SOURCE: Massachusetts Office of Business Development

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Argeo Paul Cellucci
Governor

David A. Tibbetts
Director of Economic Development

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team up with New Balance to ensure this company remains right where it belongs—in Massachusetts.”

Ed Pignone, Chief of Staff of the Greater Boston Chamber of Commerce, echoes the sentiment. “We are delighted that New Balance has chosen to remain in our region,” he says. “New Balance will continue to broaden the economic base and further develop an already thriving economy.”

Stebbins says, “The investment by New Balance in Boston sends the message that Massachusetts is a competitive location for businesses that compete in a global market. In addition, it stresses the point that our key incentives are available to those companies already doing business here and not just to those from out of state.” ●

The combined efforts of the state, city, and company resulted in a package that made it feasible for New Balance to stay in Boston. The company's interest in moving to the former Bull Electronics building in the Brighton Landing part of Boston made the deal even easier.



Maynard Clock Tower

Keeps On Ticking

Robina A. Gangemi

CENTRAL

More than 100 years ago, Amory Maynard built a mill, dam, and pond for his Assabet Woolen Company. Little did he know his actions would reverberate more than a century later.

He didn't just build a mill; he helped build a town. Maynard bears his name and carries an image of his mill's clock tower on its town seal. The mill has long been the heart of the town and is now beginning to pulse with life again.

The mill manufactured blankets for Union troops and parachutes during World Wars I and II, but the textile industry headed south in the 1950s, leaving the mill behind. Until 1957, that is, when Ken Olsen founded Digital Equipment Corp. there, turning Maynard into a boom town. But times changed and DEC sold the mill in the early 1990s. By 1995 the facility was empty and area merchants saw business drop. The single largest tax parcel in the town was dormant, shifting 20 percent of the tax burden onto residents.

Enter Wellesley Rosewood Capital, LLC. Earlier this year, general partners Robert Buonato of Wellesley Management Company and William Depietri of Rosewood Construction bought the complex with limited partner Joseph Mullin and project director Robert Macnamara, Jr. Already the four men have had a noticeable effect on the town of Maynard.

"The Clock Tower Place folks are doing the town a great service by bringing people into the area. Our shops and restaurants are already seeing more traffic, and business is exponentially increasing."

—Mike Gianotis,
Maynard Town Administrator

"The Clock Tower Place folks are doing the town a great service by bringing people into the area," says Maynard Town Administrator Mike Gianotis. "Our shops and restaurants are already seeing more traffic, and business is exponentially increasing."

Clock Tower Place is an intriguing mix of the old and the new: a century-old facility wired with a fiber-optic infrastructure; in a rural environment but located near major transportation routes—the commuter rail, I-495, Routes 3 and 128, and the Massachusetts Turnpike. Wellesley Rosewood is offering both office and light manufacturing space, at a rate substantially lower than in comparable areas, to high-tech and computer-related organizations.

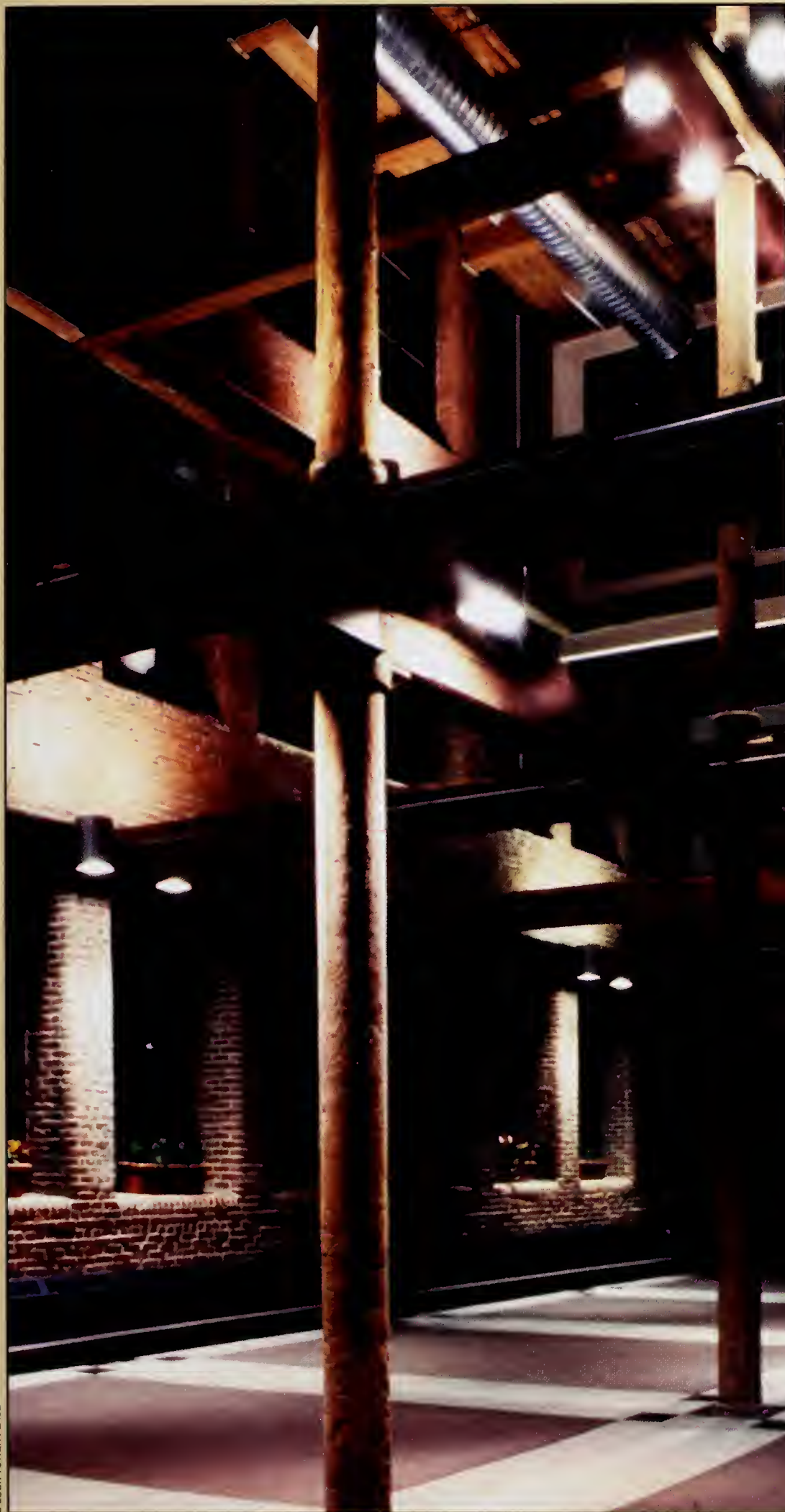
"We're leasing spaces of 500 square feet and up in hopes that there will be a Digital and Ken Olsen among them," says Mullin, a fourth-generation mill worker who grew up in the area.

The 18-building complex boasts plenty of parking, open floor plans, custom-building capability, a conference center with a 110-seat auditorium, flexible lease terms, and immediate availability. The facility's 1.1 million square feet on 45 acres make it one of the five largest commercial/industrial locations in Massachusetts. There are still 800,000 square feet available, but "I would expect that by the end of the year it will be 20 percent to 25 percent occupied," says Chuck Miller, former Central Regional Director for the Massachusetts Office of Business Development (MOBD).

So far, about 25 tenants occupy the space, and are soon to be joined by Bell Atlantic. The largest of the current tenants, The Monster Board, has some 300 employees occupying 80,000 square feet to run the Web-based recruitment site. "We chose Clock Tower Place for a number of reasons," explains Facility Manager Joanne Katz. "First, it's located in a good place. Second, it's a unique space; it has a lot of character and history. And third, the floor plan gave us a lot of room to be creative in how to build the site out, which was very important to us."

With the mill humming again, Maynard residents have mobilized efforts for community planning and economic development. Already, the town has plans for public walkways and jogging paths along the mill's pond, and it has as an option for about 20,000 square feet within the complex for municipal use.

"People take pride in having the space full and seeing lights reflecting off the pond at night again instead of it being dark," says Gianotis. ●



CLOCK TOWER PLACE

Clock Tower Place, an 18-building complex, has about 25 tenants and will soon add Bell Atlantic to the list.

CLOCK TOWER PLACE

Lunt Silversmiths

Strikes Retail Gold

Deb Shapiro

WEST

In 1849, throngs of would-be prospectors headed west in search of gold. Now, nearly 150 years later, the Lunt family is hoping the pioneering spirit is still alive. Only this time, they're banking on people heading west—to western Massachusetts, that is—for silver.

Two years ago Lunt Silversmiths, an internationally known manufacturer of fine silver goods, spent \$3 million to broaden its business base, adding to its Greenfield site a retail store, a restaurant, and viewing stations where visitors can watch silversmiths, glass-blowers, weavers, and other artisans at work.

The decision to expand the company from a manufacturing operation into a retail and tourist destination was an easy one; it simply made sense, says Colby Lunt, Vice President of Marketing.

"The decision process included our core team first analyzing the opportunities existent at our current home location," says Lunt, who represents the fourth generation of Lunts to own and operate the 96-year-old company. "We also studied the outlet business and the climate for travel and tourism in the western part of the state.

"We have been selling to retail for over 90 years, and the stretch to becoming retailers in this context was not that great," he adds. "Not easy, but approachable. We mapped out the potential and decided that an 'entertaining' facility was our best bet."

That entertaining facility includes 10,000 square feet of retail space, which is expected to generate between \$175 and \$200 of business per square foot, Lunt says. In total, Lunt projects \$8 million in annual sales from the retail operations, which include the design center, restaurant, catalog, and on-line sales.

At a time when American manufacturing jobs are being shipped to Mexico or overseas, Lunt says, he never considered relocating.

"The expansion has nothing to do with securing manufacturing abilities here. It has a lot to do with showcasing our design and manufacturing abilities, as well as building the Lunt brand in the Northeast," he says. "We established the business on our home site to leverage our factory-direct message. We also made a 'home-town' effort to enhance our community's efforts to market itself to the increasing traffic heading north and





south on [Interstate] 91.”

Lunt also says the changes that have taken place have provided him more control of his product because he is selling directly to consumers and manages the image and presentation of Lunt products.

“We are a design-driven business, and our daily job is to design and build products that enhance quality of life for consumers around the world. Concentrating some of this effort at the Lunt Design Center in Greenfield has been fun and rewarding,” he says.

Lunt’s expansion has also been a boon to the company’s hometown of Greenfield. Under the state’s Economic Development Incentive Program (EDIP), Lunt received a 10-year property tax incentive on its \$3 million, 13,000-square-foot addition. The tax break came with certain conditions, one of the most important being a requirement to create 40 new jobs within 10 years. So far the company has created 35, according to Arthur Levin, Project Manager for the Massachusetts Office of Business Development (MOBD).

“Lunt had 10 years to create these jobs, and they’ve nearly done it in two,” Levin says.

The Lunt company, which includes Lunt Silversmiths and three subsidiaries (Heritage Cutlery, Couzon USA, and Lunt Direct), now employs more than 250 people.

Lunt’s transition has also made it a tourist destination. Its location close to two of the region’s top tourist attractions—Yankee Candle Company and Historic Deerfield—is expected to help it draw customers. “In the Massachusetts tourism business you hear that people just don’t go west,” Levin says. “In the east—the Boston area—people don’t go west except to Tanglewood. We’re hoping the Lunt Design Center will make [western Massachusetts] a destination spot.”

Now when day trippers and vacationers are driving along I-91 or Route 2, they have brown signs, which connote a historic spot, leading them to Lunt Design Center and Marketplace. Those signs, Levin hopes, will attract many of the 10 million cars a year that pass along those major byways just one mile from the Lunt site.

It may be too soon to tell, but Levin says he thinks Lunt’s expansion will enable western Massachusetts to become even more of a gold mine for tourists. ●

Gloucester

Remains Anchored in Success

Clay Collins

NORTHEAST

The sun slants down on the promenade along Stacy Boulevard, and on the green, weathered statue: "The Gloucester Fisherman," swathed in foul-weather gear, leans hard into his helm. An American icon, the statue memorializes this Cape Ann city's lost sons.

It also symbolizes an industry that long carried Gloucester. By the 1760s, when the cod ran so thick they were said to slow the progress of boats, 75 fishing schooners already plied these waters. A profitable trade for generations, fishing also proved to be an unforgiving one. The business eventually imperiled livelihoods as well as lives. As federal regulations clamped down in the mid-1990s to preserve dwindling fish stocks, overdependence on fishing might have swamped the local economy.

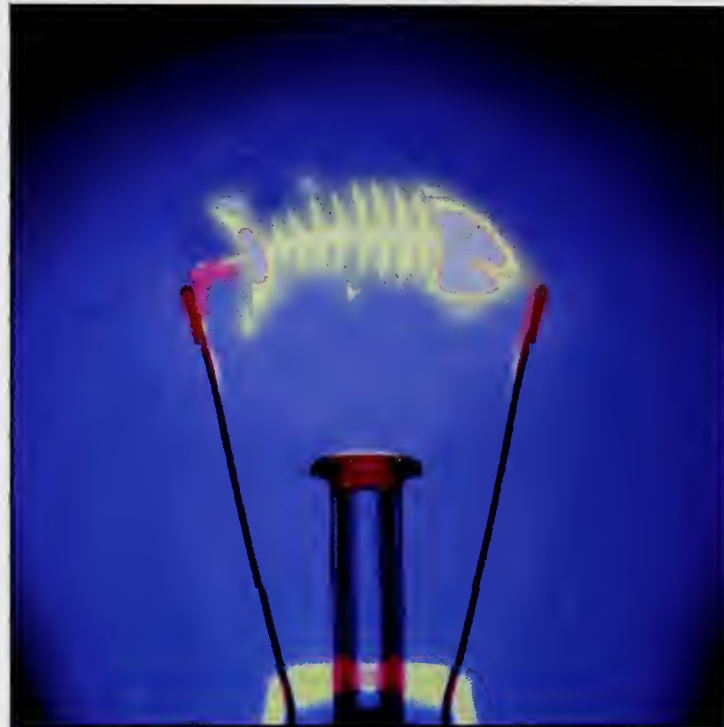
But Gloucester had made provisions to do more than just keep afloat. Today, this old town is thriving again. Commercial fishing and related businesses remain integral. Nationally known Gorton's, founded in 1849, still sits in the heart of the 375-year-old, red-brick downtown. But fish sticks are hardly the only game in town.

"The real engine of the economy now is light industrial," says Carolyn Stewart, Executive Director of Gloucester's Economic Development and Industrial Corporation. "We have seen significant growth over four or five years in that part of the community. In each of those years, more jobs were created there than exist in the fresh-fish industry," she says, explaining that such growth provides a buffer against fishing's fluctuations.

"Gloucester is doing well today because we have diversified our economic base," Mayor Bruce Tobey told the *Boston Globe* in September. "There is no question the fishing industry is important to Gloucester's future. But the city has learned the hard way not to be dependent on one or two sectors of the economy...[Now] we have companies here making everything from plastic extrusion [to]...the push-button screens for microwaves."

The city was reminded recently of the wisdom of such economic diversity. The high-tech industry was another segment that had been booming. Gloucester-made semiconductor equipment is favored by top manufacturers in the United States, Europe, and Asia. Nevertheless, that industry, like many others, felt the nationwide dip caused by a financial crisis in Asian markets.

But even as a high-tech resurgence is already under way, other Gloucester manufacturers have kept the city driving forward. Take NutraMax Products, a health- and personal-care products company. The number one maker



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of products ranging from disposable baby bottles to toothbrushes, it posted record first-quarter sales this year of nearly \$34.5 million, an increase of 56.4 percent over the same period in 1997.

NutraMax has demonstrated its commitment to this seaport town, employing more than 1,250 people and opening a new 80,000-square-foot, state-of-the art distribution center, designed to ship 30,000 to 40,000 cases of products per day.

"I think Gloucester has done a superb job of retaining manufacturers and helping them to expand their operations," says David A. Tibbetts, Massachusetts Director of Economic Development.

The incentives for which Massachusetts is earning a name helped make that happen. Cape Ann is one of 34 designated Economic Target Areas (ETAs), which means businesses relocating here, expanding here, or creating permanent new jobs qualify for a 5 percent state investment tax credit. Other advantages include tax increment financing (TIF), a five- to 20-year tax incentive based on a property's increased value brought about by improvement.

Locating here has other, less tangible attractions, too. Like a sense of synergy that goes beyond light manufacturing and semiconductor equipment. Lisa van Sand, who runs her own local firm, Lucky Dog Design, is also an administrator for Working Capital, a program begun in 1995 that works with about 60 small businesses. She had her eye on Gloucester's businesses as the fishing industry declined.

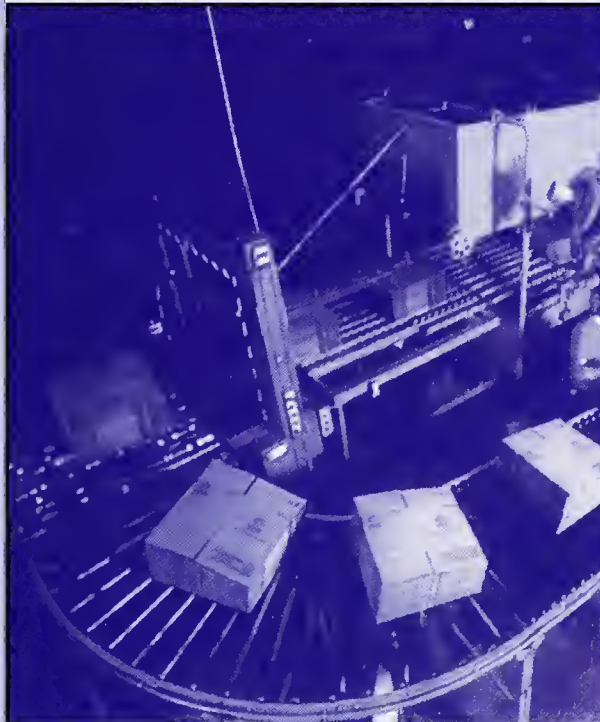
"One thing that became clear was that businesses that did *not* fish, process, or sell fish in Gloucester were also being affected," van Sand notes. "For example, a laundry owner saw a decrease of 40 percent of his business because the fishermen who had once brought their sea bags in had started doing their own laundry."

Van Sand points to grassroots diversification as a way not only for individuals to get by, but also to raise the community's quality of life. "Many of our members started their businesses in their homes and have grown to larger offices," she says. For everyone offering a service like marketing, there's someone developing on-line magazines or aromatherapy products.

That may be about as far as a business can get from fish holds. But Gloucester is working to stay true to its fishermen, too, with more money expected to be earmarked for preserving a working waterfront. High-tech and fishing have even had a confluence. The stand-out local story for Orlando Salazar, MOBD's Acting Regional Director, is Star Fisheries, which seems to have taken its cue from the clean rooms of one of those high-tech firms.

"You see buyers from restaurants and stores bidding via television. They have office space and phones. They bid inside, away from the smell," Salazar says with a laugh. "It's changed the image of the fish industry. It's all so modernized, it could rival Wall Street." ●

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